

What Is Claimed Is:

1. A method for manufacturing carbon nanotube structures

comprising the steps of:

applying carbon nanotubes to a low-viscosity dispersion medium to obtain a high-viscosity dispersing liquid which includes carbon nanotubes; and

forming a network of the carbon nanotubes having electrical and/or magnetic connections therebetween by removing the low-viscosity dispersion medium from the high-viscosity dispersed liquid.

2. The method for manufacturing carbon nanotube structures according to Claim 1, wherein other objects are further dispersed in the high-viscosity dispersing liquid.

3. The method for manufacturing carbon nanotube structures according to Claim 1, wherein the dispersion medium is removed while the high-viscosity dispersing liquid dispersed being in contact with given trapping sites.

4. The method for manufacturing carbon nanotube structures according to Claim 3, wherein the trapping sites are planar boards.

5. The method for manufacturing carbon nanotube structures according to Claim 3, wherein channel structures, in which the trapping sites contact the high-viscosity dispersing liquid, are contained, the high-viscosity dispersing liquid is made to contact the trapping sites through the

channel structures, and the carbon nanotubes are arranged along the channel structures.

6. The method for manufacturing carbon nanotube structures according to Claim 5, wherein the channel structures are formed by concave and convex parts on the planar boards.

7. The method for manufacturing carbon nanotube structures according to Claim 5, wherein, the channel structures are formed by patterning a surface of the planar board into a condition, in which it has a different lyophilic from that of the dispersion medium.

8. The method for manufacturing carbon nanotube structures according to Claim 3, wherein the trapping sites are formed by arranging particulate and/or film metal on the planar boards.

9. The method for manufacturing carbon nanotube structures according to Claim 1, wherein a quantity of the carbon nanotubes is controlled by adjusting a density of the carbon nanotubes in carbon nanotube structures to be produced.

10. Carbon nanotube structures comprising:  
networks of carbon nanotubes having electric and/or magnetic connections therebetween, which are formed by removing a low-viscosity dispersion medium from a high-viscosity dispersing liquid containing the carbon nanotubes, the high-viscosity dispersing liquid having been obtained by applying the carbon nanotubes to the low-viscosity dispersion medium.

11. The carbon nanotube structures according to Claim 10, wherein

other objects are further dispersed in the high-viscosity dispersing liquid and the other objects are dispersed and arranged in the networks.

12. The carbon nanotube structures according to Claim 10, wherein the networks are formed by contacting the given trapping sites.

13. The carbon nanotube structures according to Claim 12, wherein the trapping sites are on the planar board.

14. The carbon nanotube structures according to Claim 12, wherein channel structures are contained in the trapping sites and carbon nanotubes are arranged along the channel structures.

15. The carbon nanotube structures according to Claim 14, wherein the channel structures are formed by the concave and convex parts on the planar boards.

16. The carbon nanotube structures according to Claim 14, wherein the channel structures are formed by patterning surfaces of the planar boards into a condition, in which the surfaces have a different lyophilic from that of the dispersion medium.

17. The carbon nanotube structures according to Claim 12, wherein the trapping sites are formed by arranging particulate and/or film metal on the planar boards.

18. The carbon nanotube structures according to claim 10, wherein at least some of the carbon nanotubes in the networks physically contact each other.

19. The carbon nanotube structures according to claim 10, wherein

objects other than the carbon nanotubes are added at least at a certain part among the carbon nanotubes in the networks.

20. The carbon nanotube structures according to Claim 19, wherein the objects other than the carbon nanotubes are involved with an electrical conductivity and/or magnetic characteristic among the carbon nanotubes.

21. Carbon nanotube devices comprising the carbon nanotube structures according to Claim 10.

22. The carbon nanotube devices, which are formed by two or more carbon nanotube structure layers comprising the carbon nanotube structures according to Claim 10.

23. The carbon nanotube devices according to Claim 22, wherein a functional layer is formed between at least two carbon nanotube structure layers.

24. The carbon nanotube devices according to Claim 23, wherein the functional layer contains a functional object, and some carbon nanotubes contained in both the carbon nanotube structures facing with the functional layer therebetween are electrically and/or magnetically connected through the functional layer.

25. The carbon nanotube devices according to Claim 21, wherein at least some of the carbon nanotube structures function as conductive wiring.

26. The carbon nanotube devices according to Claim 21, wherein at least some of the carbon nanotube structures function as planar electrodes.

27. The carbon nanotube devices according to Claim 21, wherein at

least some of the carbon nanotube structures function as device circuits.

28. Carbon nanotube devices comprising:

carbon nanotube structures, in which networks are formed by

plural carbon nanotubes randomly intercrossed;

supporting members which support the carbon nanotube structures;

and

plural electrodes disposed on the supporting members, which are

electrically connected to the carbon nanotube structures and used as

electrical terminals connected to external devices.